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Newman

(54) **SYSTEM FOR ANONYMIZATION AND FILTERING OF DATA**

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G06F 17/27	(2006.01)

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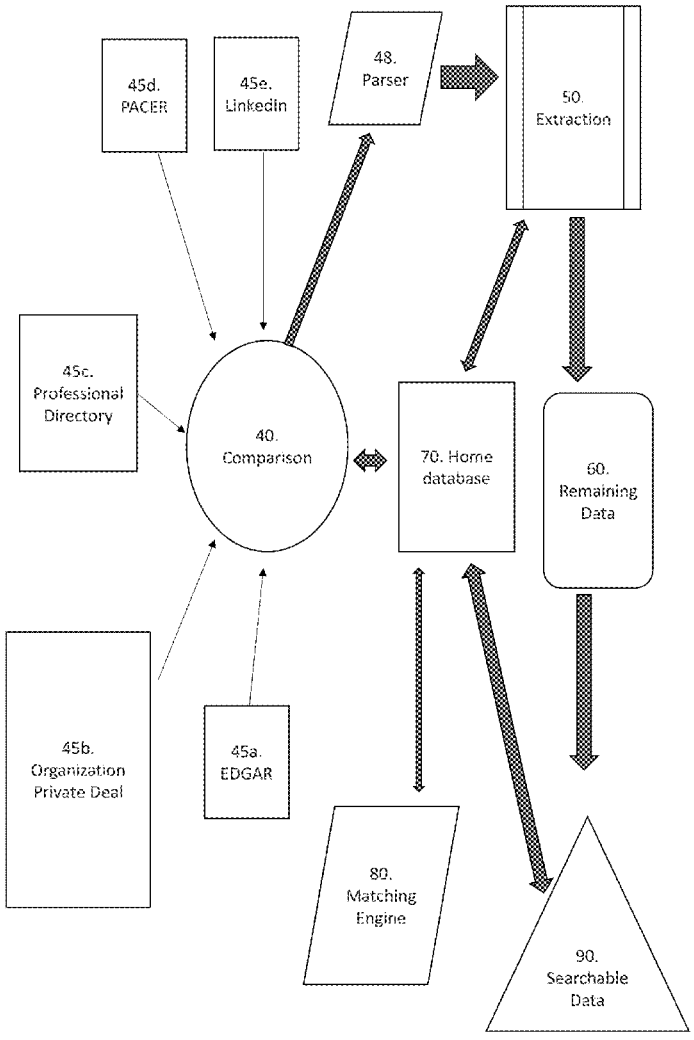
(57) **ABSTRACT**

An information-retrieval system includes a server that manages document retrieval, anonymizes data, receives queries for documents from client devices and means for outputting results of queries to the client devices, with the results provided in association with one or more interactive controls and filters that are selectable to invoke display of masked information and related professionals, referenced in the results.



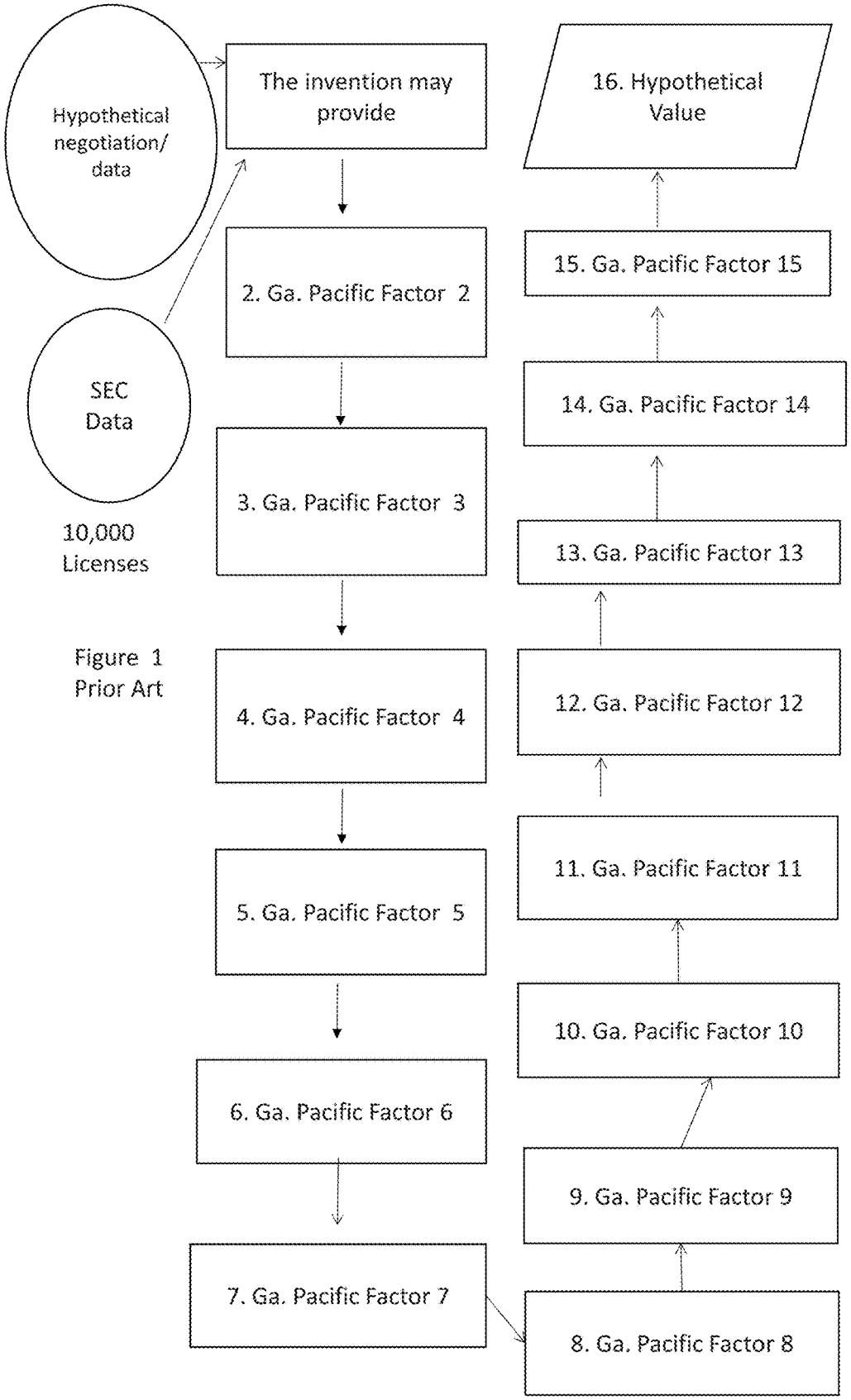
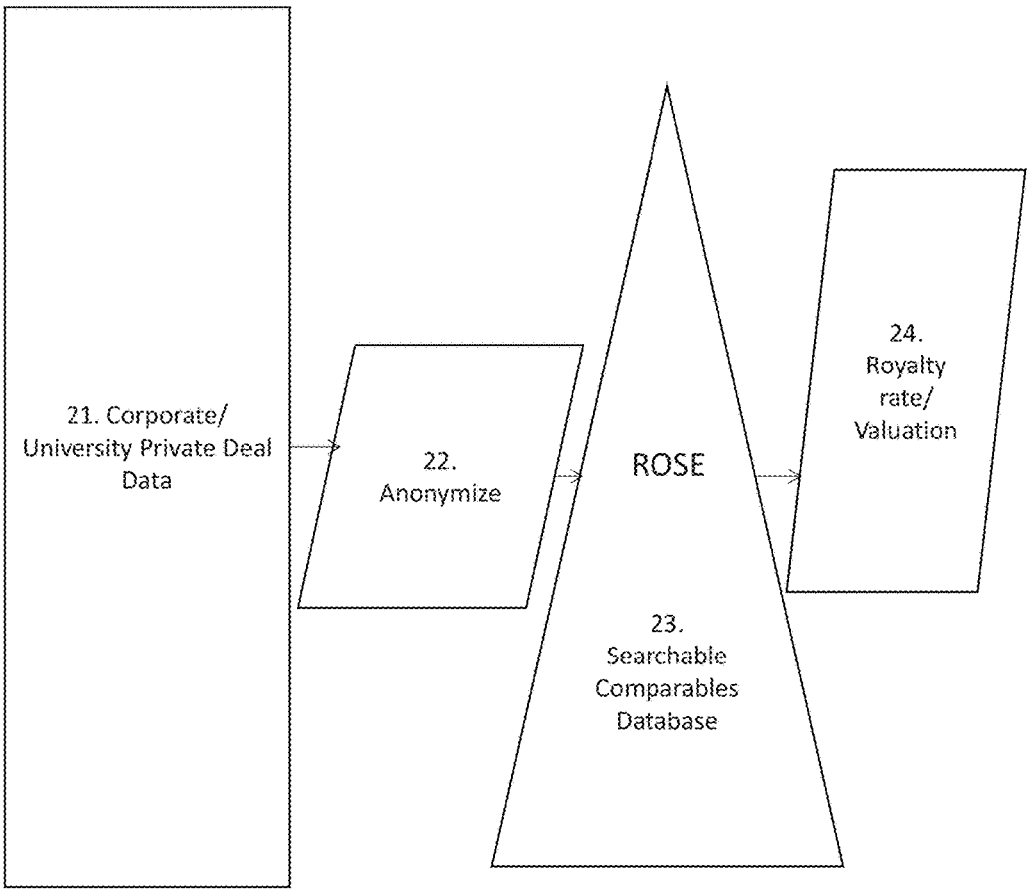


Figure 1
Prior Art



100,000 Licenses

Figure 2

Figure 3

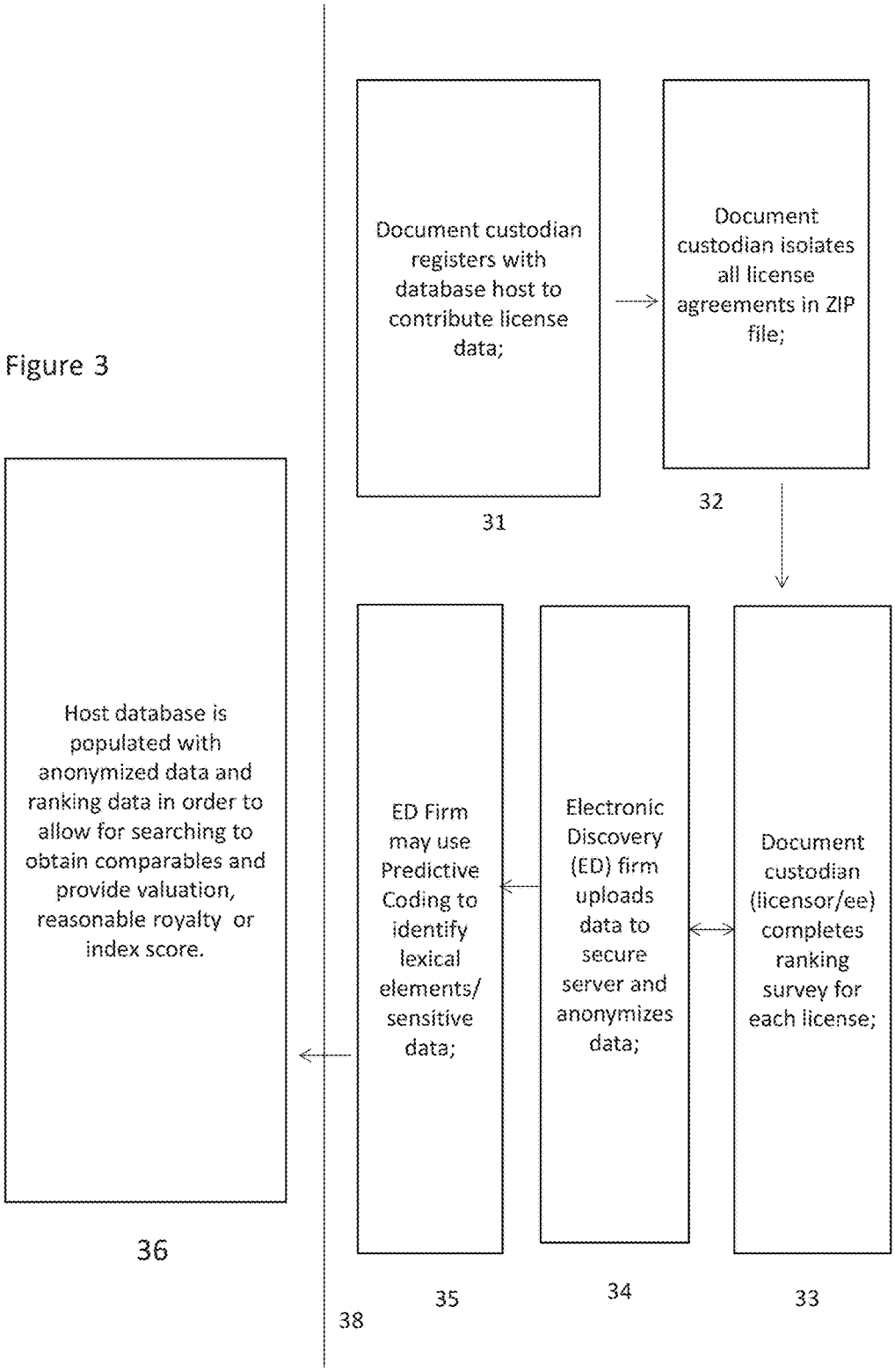

Document custodian registers with database host to contribute license data;
Document custodian isolates all license agreements in ZIP file;
31
32
Host database is populated with anonymized data and ranking data in order to allow for searching to obtain comparables and provide valuation, reasonable royalty or index score.
ED Firm may use Predictive Coding to identify lexical elements/ sensitive data;
Electronic Discovery (ED) firm uploads data to secure server and anonymizes data;
Document custodian (licensor/ee) completes ranking survey for each license;
36
35
34
33
38

Figure 4

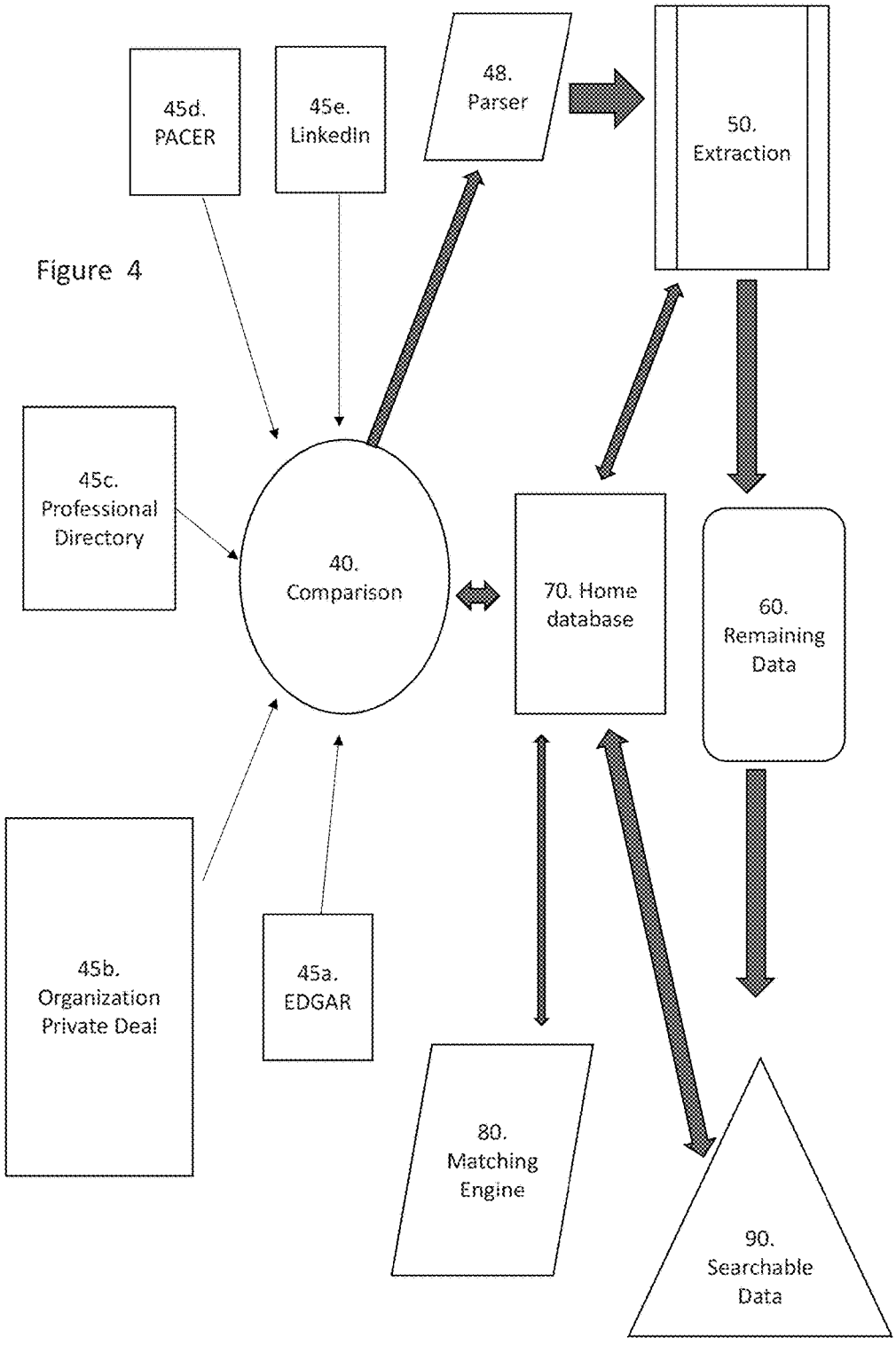

45d. PACER
45e. LinkedIn
48. Parser
50. Extraction
45c. Professional Directory
40. Comparison
70. Home database
60. Remaining Data
45b. Organization Private Deal
45a. EDGAR
80. Matching Engine
90. Searchable Data

Figure 5

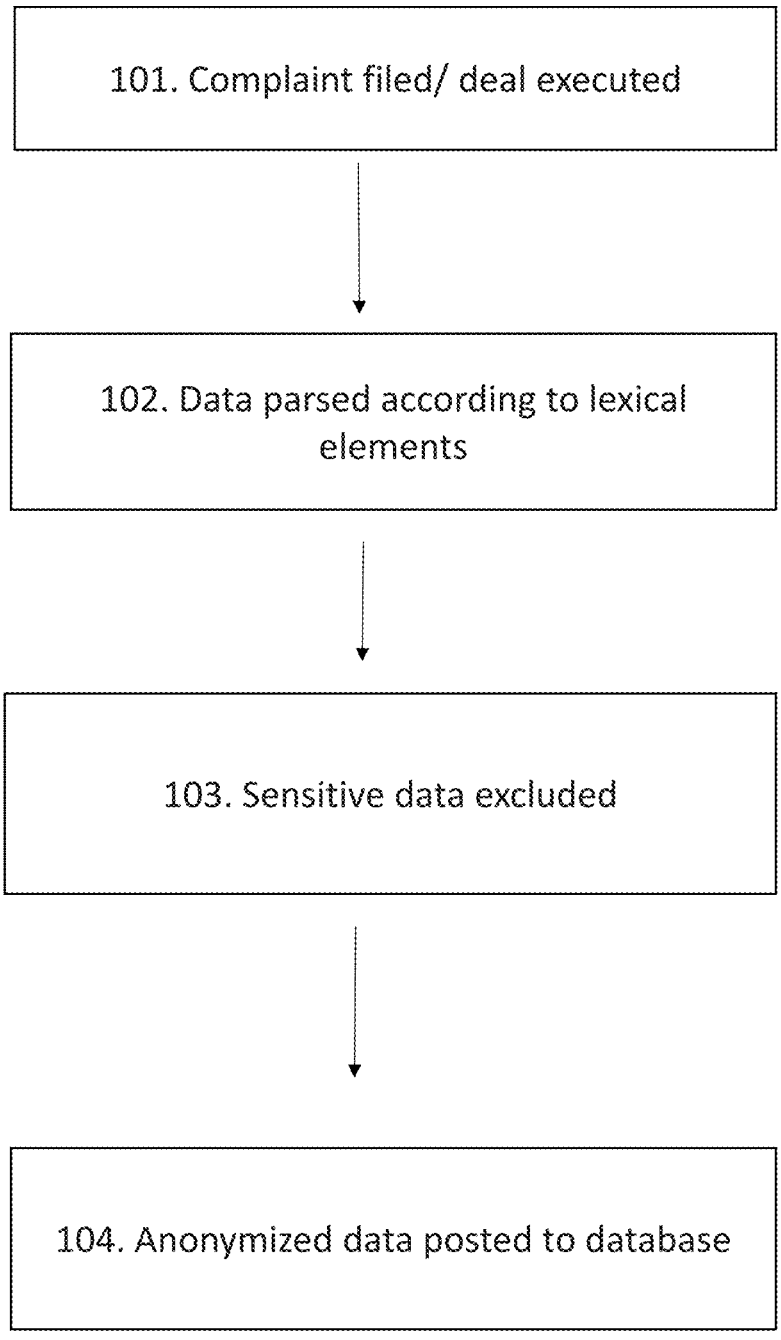

101. Complaint filed/ deal executed
102. Data parsed according to lexical elements
103. Sensitive data excluded
104. Anonymized data posted to database

Figure 6

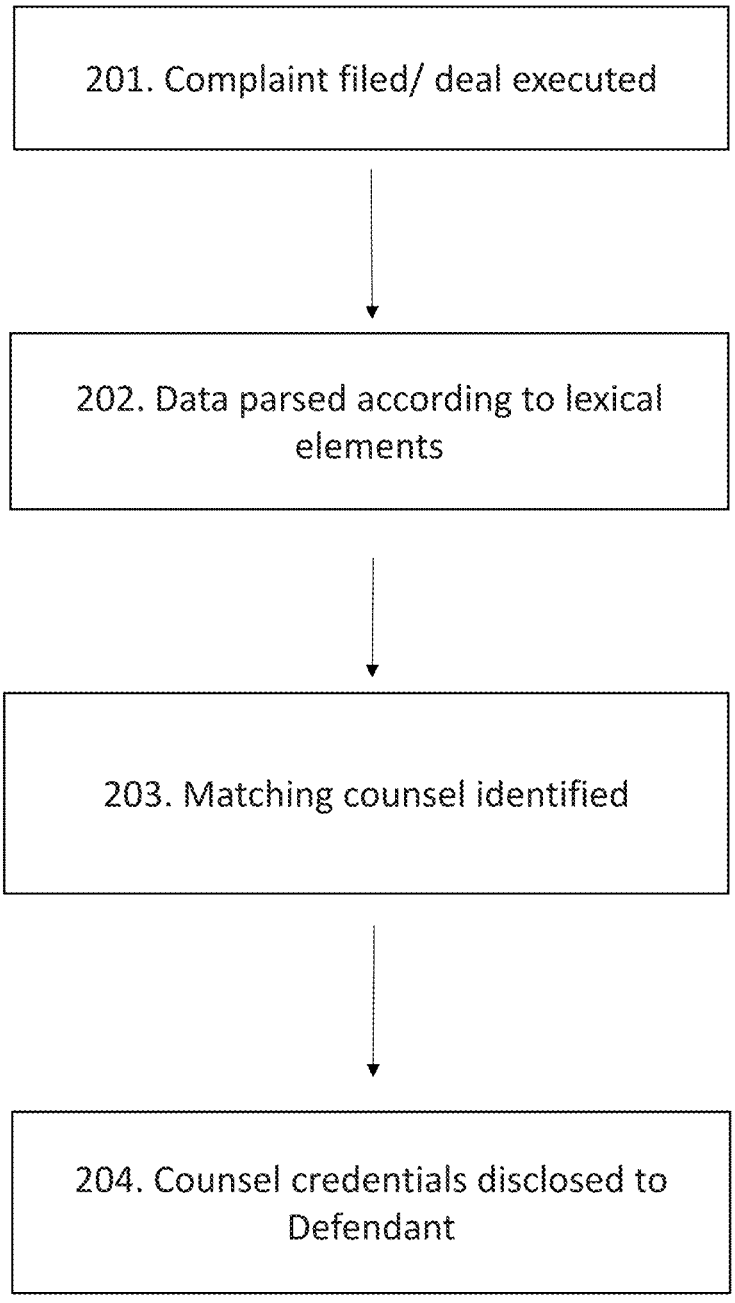
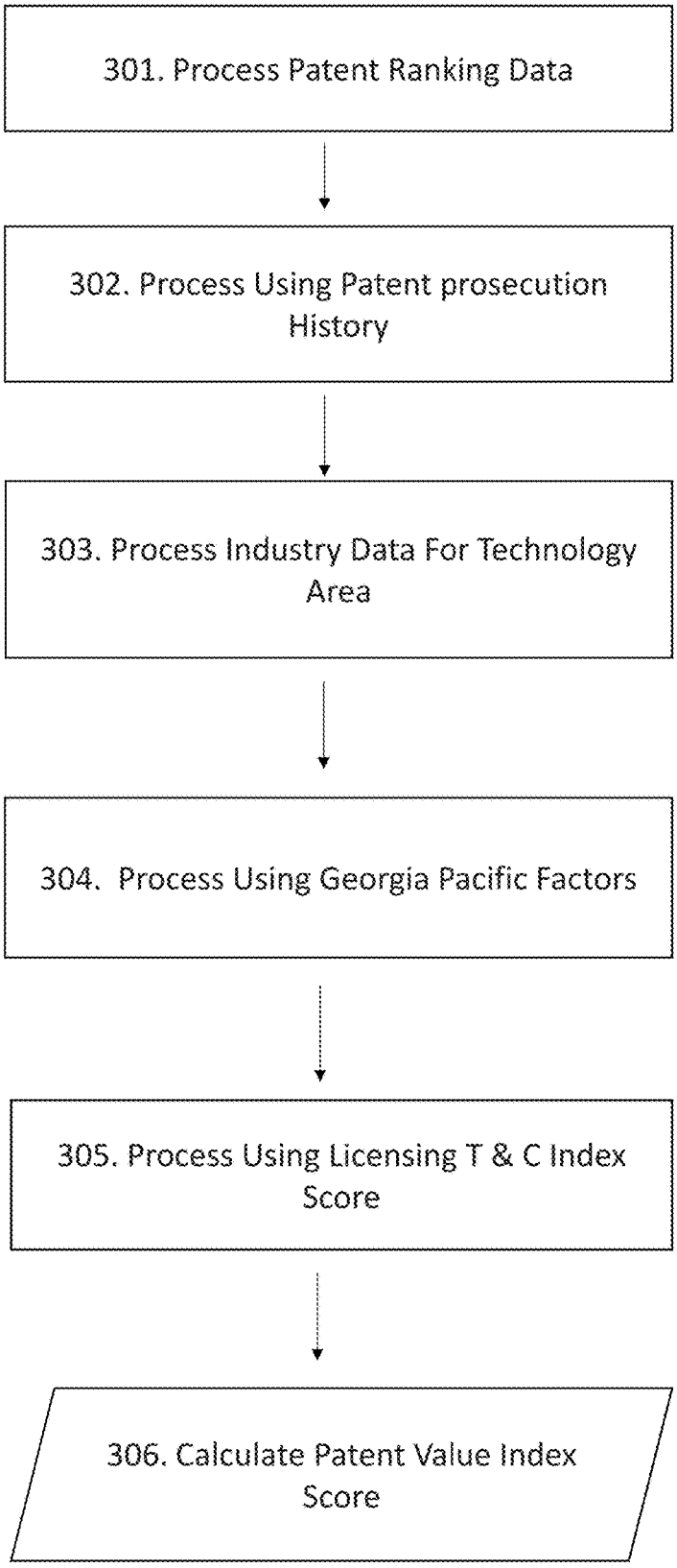

201. Complaint filed/ deal executed
202. Data parsed according to lexical elements
203. Matching counsel identified
204. Counsel credentials disclosed to Defendant

Figure 7


301. Process Patent Ranking Data
302. Process Using Patent prosecution History
303. Process Industry Data For Technology Area
304. Process Using Georgia Pacific Factors
305. Process Using Licensing T & C Index Score
306. Calculate Patent Value Index Score

SYSTEM FOR ANONYMIZATION AND FILTERING OF DATA

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims priority from U.S. Application No. 62/464,453, filed Feb. 28, 2017, incorporated by reference in its entirety.

TECHNICAL FIELD

[0002] The present application relates to anonymization and filtering of document data containing confidential information. The anonymization may include data masking, de-identifying, randomizing and synthetic data creation. In an embodiment, the anonymization is applied to documents such as license agreements that contain sensitive information including licensor or licensee name or patent number. The filtering system may be applied to litigation data and match attorney credentials with litigation subject matter.

BACKGROUND OF THE INVENTION

[0003] Privacy concerns are prevalent with respect to medical data due to HIPPA laws. Methodologies have been developed to anonymize sensitive information from medical data so that researchers may study large groups of data in order to analyze outcomes and levels of treatment success or failure. High risk attributes may be removed from data sets including name, social security number, address, medical condition, date of birth, gender, race or zip code. While such attributes present privacy challenges in the medical field that have been resolved through traditional anonymization methodologies, such tools have not been adopted in other fields.

[0004] For example, business data records may include sensitive information such as monetary data including sales prices, profit margins, trading margins or frequency. Also, in the area of intellectual property there is sensitive data included in licenses including licensee name, licensor name, patent number, trademark registration number or copyright registration number. The present invention provides new methodologies for handling sensitive information regarding intellectual property transactions.

Previous methods to collect licensing data have been inefficient and provide inadequate valuation methods. FIG. **1** depicts a prior art system for valuation of patents. The system is based mainly upon a hypothetical negotiation paradigm established by Judge Tenney of the Southern District of New York in Georgia-Pacific v. U.S. Phywood Corp, 318 F Supp 1116, 1120 (S.D.N.Y. 1970). To apply the 15 Georgia Pacific factors and establish facts of the hypothetical negotiation usually requires a patentee to hire an expert to conduct the valuation. Data can also be obtained from public SEC records containing reasonable royalty rate data. Such databases typically contain 10,000 or less total licenses spread across all technology areas with such data collected, a valuation expert undertakes the difficult and time consuming effort to apply the 15 Georgia Pacific factors 1-15 (FIG. **1** in order to arrive at a hypothetical value or royalty rate 16 for the asserted patent(s) The Georgia Pacific factors are.

[0005] 1. "The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.

[0006] 2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.

[0007] 3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.

[0008] 4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.

[0009] 5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.

[0010] 6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.

[0011] 7. The duration of the patent and the term of the license.

[0012] 8. The established profitability of the product made under the patent, its commercial success; and its current popularity.

[0013] 9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.

[0014] 10. The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor and the benefits to those who have used the invention.

[0015] 11. The extent to which the infringer has made use of the invention, and any evidence probative of the value of that use.

[0016] 12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

[0017] 13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

[0018] 14. The opinion testimony of qualified experts.

[0019] 15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount that a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

[0020] The use of the Georgia Pacific factors is usually very expensive and has been criticized by many IP practitioners and judges. A more streamlined valuation system is needed to establish a more efficient technology transfer, valuation system and IP marketplace.

[0021] Data systems exist that analyze documents based on the types of legal proceedings, legal documents and

names of people in the documents. For example. West Publishing Company provides thousands of electronic judicial opinions and links the names of judges and attorneys to their online biographical entries in the West Legal Directory. This directory provides a directory of approximately 20,000 judges and 1,000,000 U.S. attorneys and allows users to obtain contact information about lawyers and judges named in the opinions and access judicial opinions.

[0022] The West directory uses this information to determine whether to link the named attorneys and judges to their corresponding entries in a directory. Additional need for improvement in these and other systems to generate further automatic links and matching attorneys to newly filed proceedings and anonymizing data is desired.

BRIEF DESCRIPTION OF DRAWINGS

[0023] FIG. **1** is a flow diagram depicting a prior art system for valuing patents;

[0024] FIG. **2** is a flow diagram depicting the present invention for a streamlined valuation system;

[0025] FIG. **3** is a flow diagram depicting the collection of licensing data of the present invention;

[0026] FIG. **4** is a diagram of an exemplary information-retrieval system corresponding to one or more embodiments of the invention;

[0027] FIG. **5** is a flow diagram corresponding to one or more exemplary methods of operating the system for anonymizing data;

[0028] FIG. **6** is a flow diagram corresponding to one or more embodiments of the invention for matching a counsel's credentials with a subject matter of a litigation for a defendant; and

[0029] FIG. **7** is flow diagram corresponding to an exemplary embodiment of the invention that establishes a patent value index score.

[0030] This description references and incorporates the above-identified Figures, describes one or more specific embodiments of the invention that are offered only to exemplify the invention and are shown and described in sufficient detail to enable those skilled in the art to implement or practice the invention.

SUMMARY

[0031] The invention provides a system for anonymizing license data comprising a first database including a set of records, a parser module to identify one or more lexical elements contained within a license document, a comparison module adapted to compare a first category reference against the lexical elements and an extraction module adapted to extract the first category reference from the document based at least in part on the lexical elements wherein the first category reference contains sensitive license information.

[0032] The invention may provide the first category reference comprising sensitive license information including one or more of patent number, assignee name, inventor name and owner name. The invention may provide the set of records include one or more of legal records from PACER, Linked-In or licensing records from licensing organizations.

[0033] The invention may provide an extraction engine for collecting ranking information from one of the following categories including exclusivity clause in license, enforceability clause in license, entanglements issues, royalty rate, royalty calculation clause, auditing clause, hot technology sector, payment of annuity, patent expiration, patented portion, SEO, lump sum payment, licensing as a result of litigation, size of licensor/ee, FRAND commitment applied, minimum annual royalty required, and first office action allowance. The ranking is applied in a manner to identify the strength of a patent license, strength of a patent or the most flexibility for generation of maximum royalties using a numeric scale assigned to sub-categories.

[0034] The sub-categories include one of an exclusivity clause: no clause, exclusive, some portion is exclusive, non-exclusive; enforceability clause: no termination clause, termination clause but no right to sue, termination clause and clear definition of licensed product to allow for right to sue, termination clause and liquidated damages clause and clear definition of licensed product; entanglements: Standard Essential Patent (SEP) or lacking clear definition of SEP, SEP under Standard Setting Organization (SSO) rules with strict enforcement policy, SEP under SSO with lenient enforcement policy, non-SEP; Royalty calculation: no clause, capped total royalty payment, one-time payment, percentage rate or unit rate for life of patent; royalty: no royalty or unit rate, rate is under 3%, rate is 3-10%, rate is higher than 10%; auditing capability: no auditing clause, audit solely invoices, audit all books and records, audit all books and records and certified financial statements; granularity of field of use definition: no field of use definition, loose definition; detailed definition; definition tracks claims of majority of patents; hot technology: unrated technology, technology sector included in bottom third of NASDAQ composite companies, technology sector included in middle third of NASDAQ composite companies, technology sector included in top third of NASDAQ composite companies; patentee investment in patent: 1^{st} Office Action allowance, patent granted after request for continued examination, patent granted after appeal, paid 1^{st} annuity (small entities only), paid 2^{nd} annuity (small entity only), paid 3^{rd} annuity (small entity only), filed counterparts in at least 5 foreign countries (small entity only).

[0035] The ranking may be provided as a percent rank. The anonymization may include one of database anonymization, database sanitization, masking, synthetic data, Statistical Disclosure Control (SDC), Statistical Disclosure Limitation (SDL), Privacy Preserving Data Publishing (PPDP), Privacy Preserving Data Mining (PPDM), microdata anonymization, perturbative masking, non-perturbative masking, threshold-based record linkage, rule-based record linkage, probabilistic record linkage, data de-identification, k-Anonymity modeling, t-Closeness microaggregation, calibration to sensitivity and multivariate microaggregation and individual ranking microaggregation.

[0036] The invention may provide a selection system comprising a biographical parsing engine and a biographical database set of records, the system comprising a means for parsing content of a document to identify one or more lexical elements determined to be indicators of target entity data, means for extracting a first set of the target entity data from the document based at least in part on the lexical elements, means for comparing the first set of target entity data against a biographical database set of records, means for determining whether one or more of the target entity data match one or more records from the set of biographical database set of records and means for merging matching records from the target entity data and the set of biographical database and generating a set of merged matching records.

[0037] The invention may provide means for updating the set of biographical database with target entity markers related to target entity data and providing links associated with a set of records from the biographical database set of records. The invention may provide means for delivering information related to the merged matching records to a defendant listed in the document. The biographical database may relate to individuals considered to be expert within at least one of the following fields: legal, dispute resolution, financial, accounting, engineering, healthcare, medical, scientific, research and educational. The invention may provide a document including a legal complaint and the target entity data including one of lexical elements relating to one of a technology, jurisdiction and judge.

[0038] The legal complaint may include a count for patent infringement and the lexical elements include technical terminology from the asserted patent. The lexical element may include the patent classification code from a patent listed in the legal complaint. The parsing engine may include a server comprising means for receiving updates of documents and automatically running queries for lexical elements and automatically outputting results of queries to client devices, with the results provided in association with one or more matching target entity data.

One or more of the recited means may include one or more processors, computer-readable medium, display devices, and network communications, with the machine-readable medium including coded instructions and data structures. The invention may provide the document in anonymized form with respect to sensitive data. The biographical database set of records includes one or more of a professional directory, a legal professional directory, a medical professional directory, and an expert witness directory.

[0039] A method for anonymizing a document is provided comprising detecting a characterization label of an entity who is a party to a contested proceeding, obtaining a set of data comprising entities, each entity being associated with one or more features related to the entity and a characterization label indicating a characterization of the entity, the characterization labels comprising an operating company label and a patent monetizing entity label and using at least some of the one or more features of the entities and the characterization labels to train a classifier for predicting the characterization label of an entity in a contested proceeding; and using the label data to compare to law firm label data in order to identify law firms with matching label data. The lexical elements may include one or more of person's name, degree, area of expertise, organization, city, state, license, professional designations or certifications, title, work experience, university, patent number, inventor name, assignee name, technology category, classification number, filing date, issuance date, publication date and license information including number of patents, exclusivity, standard essentiality, scope and royalty rate.

[0040] A second category reference is provided comprising professional information including one or more of a person's name, title, license, degree, professional designation, work experience, court appearances, firm name. A first match code set is adapted to determine whether the second category reference matches any records contained in the set of harvested entity records and saving the matched records. Disclosing the matched records to defendants listed in a lawsuit.

[0041] The second category reference may include professional records associated with one or more of the following fields: type of legal dispute, judge name, court name, law firm name, financial result, motion results, trial experience, trial results, legal subcategory of pharmaceutical, accounting, engineering, healthcare, medical, scientific, and educational. The match code set includes executable instructions for performing one or more of a Bayesian function, a match probability function, and a name rarity function. One or both of the first and second match code sets may include executable instructions for satisfying a threshold match probability criteria prior to extraction. Code adapted to store extracted category references that do not match records contained in the home database set of records. The parsing engine for harvesting professional credentials that match first category references to lexical elements of professionals listed in notice section of document and disclosing credential information to defendant listed in newly filed complaint. The parsing engine may include code when executed adapted to compare a first category reference against previously stored harvested entity records.

[0042] The harvested entity may be associated with an expert profile and the categorizing is based on area of expertise and loading license data to a central file. Applying anonymizing tool to the licensing data to remove sensitive information from each license. Creating a counterpart synthetic license document having the sensitive data removed. Loading license data from each counterpart synthetic license to a relational database and enabling searching of predetermined fields of the license data. Creating a table containing tags is established to cross-reference each license and its counterpart. Anonymizing includes one of masking, de-identifying, obsfucating and randomizing the licensing data. Anonymizing step occurs on site at custodians location where the original licensing data resides. License data from a first custodian is combined in a database with license data from a second custodian. The counterpart license data is combined in a database with ranking data specific to the counterpart license. The director may anonymize the licensing data where the director applies a template in order to remove predetermined sensitive data including patent numbers, licensor name and address and licensee name and address. The custodian may provide a group of licenses categorized solely by technology segment. Counterpart licenses are collected according to a uniform protocol and the counterpart licensing data being entered as evidence to prove a reasonable royalty rate. The entropy of the original licensing data is measured to determine the risk of identity leakage. Conditional entropy $H(\Phi|Q)$ is calculated according to the equation: $H(\Phi Q)=-\Sigma i=1VPc(i)\cdot\log 2Pc(i)$, wherein V is the number of possible values for user identity Φ and wherein $P_c(i)$ is the posterior probability of identity value, given Q.

[0043] A method for anonymizing licensing data comprising the steps of loading license data to a central file, applying the anonymizing tool to the licensing data to remove sensitive information from each license, creating a counterpart synthetic license document having the sensitive data removed and loading license data from each counterpart synthetic license to a relational database and enabling searching of predetermined fields of the license data. A table containing tags is established to cross-reference each license and its counterpart. Anonymizing includes one of masking, de-identifying, obsfucating and randomizing the licensing

data. The anonymizing step may occur on site at custodian's location where the original licensing data resides.

[0044] The license data from a first custodian is combined in a database with license data from a second custodian. The counterpart license data is combined in a database with ranking data specific to the counterpart license. A director may anonymize the licensing data where the director applies a template in order to remove predetermined sensitive data including patent numbers, licensor name and address and licensee name and address. The custodian may provide a group of licenses categorized solely by technology segment. Counterpart licenses may be collected according to a uniform protocol and the counterpart licensing data being entered as evidence to prove a reasonable royalty rate. The entropy of the original licensing data is measured to determine the risk of identity leakage. Conditional entropy $H(\Phi|Q)$ is calculated according to the equation: $H(\Phi Q)=-\Sigma i=1VPc(i)\cdot\log 2Pc(i)$, wherein V is the number of possible values for user identity Φ and wherein $P_c(i)$ is the posterior probability of identity value, given Q. The set Q includes a probabilistic attribute characterized by a probability distribution of possible values for the attribute. The user identity Φ is the sensitive licensing data from the license.

[0045] The set Q is determined to be an identity-leaking set if the level of anonymity is less than the anonymity threshold in order to remove the license from the group of licenses to be posted to the database. The numeric benchmark values may be derived by a percentile rank via the percent ranking module according to the following formula: $PR=fb+12fwN*100$ where PR is the percent rank; f_b is the frequency below the number of benchmarks which are less than the benchmark value percentile rank; f_w is the frequency within the number of benchmarks which have the same value as the benchmark value of the percentile rank; N is the number of benchmarks; and relative frequency is calculated according to the following formula: $fb=ni\Sigma ni$ where f_b is the frequency below the number of benchmarks which are less than the benchmark value percentile rank; and n is the number of benchmarks. The benchmark is determined with respect to the royalty rates of comparable licenses.

DETAILED DESCRIPTION OF THE INVENTION

[0046] Embodiments of the present invention are depicted with respect to FIGS. **2-7**. FIG. **2** is a schematic diagram of the valuation system of the present invention. The data to populate a valuation database is obtained in one example from private deal license data **21**. This data may be collected from custodians such as corporations or universities. Hundreds of thousands of licenses have been executed by corporations and universities that have been held privately and shielded from public disclosure. Many of such licenses have confidentiality clauses that prevent the licenses from being disclosed publicly. However, the anonymization system **22** of the present invention can help to isolate valuation data from sensitive data from such licenses so that the valuation data can be used publicly to establish a robust database of comparable data. By first anonymizing the licenses in order to redact sensitive information such as licensor name, licensee name, patent number(s) and other identifying information the remaining valuation data can be used to populate a searchable database **23**.

[0047] Once the searchable database **23** is fully populated with comparable license data a valuation process may be much more simplified than prior art systems as described above for example with respect to FIG. **1**. In some cases, there would be no need to use the 15 Georgia Pacific factors. A patentee, licensor or licensee may use the database in order to quickly enter comparable data to obtain a value (much as the MLS for residential real estate valuations) or reasonable royalty rate. It may be understood that the present system opens up previously private licenses and provides a more transparent technology transfer marketplace. This royalty sunshine enterprise (ROSE) can help greatly lower licensing transaction and litigation costs.

[0048] FIG. **3** depicts an exemplary embodiment for collection of license information from custodians. In the first step **31**, the custodian of a license, such as a licensee or licensor can register with the database host and agree to the terms for disclosure of license data. For example, custodians should agree that its selection of licenses to contribute will not be undertaken in a biased or discriminatory manner. In a next step **32**, the custodian (licensor or licensee) will isolate all pertinent license agreements and place them in a file, for example a ZIP file. In some circumstances, licenses relating to a certain technology category will be grouped together by the custodian and all such licenses relating to such technology area will be isolated by the custodian. Such collection of licenses can be accomplished entirely by the custodian, so that its internal security policies and procedures can be followed and no disclosure of sensitive information from the licenses leaves the custodian's custody. In an embodiment and the licensing information may be collected on a spreadsheet.

[0049] In the next step **33**, the custodian has a questionnaire/survey completed that provides detailed information about the IP covered by the license agreements. The survey is used to provide ranking information regarding the license and IP of that license. In many cases, the IP professionals who negotiated the licensing deals or managed such licenses are most knowledgeable about the IP and can provide the most accurate information regarding the value or strength of such IP. The ranking categories are described in more detail below.

[0050] At the next step **34**, the custodian or an outside vendor hired by the custodian will anonymize the isolated licenses. For example, many consultants who provide litigation support services, such as for electronic discovery and data collection are capable to anonymize data. Specific anonymization protocol will be established by the database host for the electronic discovery (ED) firm to follow, such as how to strip out patent numbers, licensor name, licensee name and addresses and other sensitive or identifying information. Further details regarding anonymization techniques are described below.

[0051] At the next step **35**, the ED firm may use predictive coding to identify pertinent licensing terms and establish a new data set including the anonymized data for the host database. In an exemplary embodiment, the ED firm may conduct its work at the custodian's premises to avoid any security breaches. A firewall **38** represents the boundary of a customer's internal computer network.

[0052] At step **36**, the ED firm transfers the anonymized data to the database host. It is understood that the license information being transferred at this time has no sensitive data included and such transfer should cause the custodian

no risk of disclosure of confidential or sensitive information outside the firewall **38**. Any identification of the custodian's identity will be communicated separately by the ED firm from the valuation data to the host of the database. The database host will populate its database with the anonymized valuation data. In an embodiment, the valuation data may be combined with the ranking data prepared at step **33**.

[0053] The database is fully populated and subscribers may search the database in order to obtain comparable license terms by which it may establish a value or reasonable royalty rate for similar IP. The database may provide, as well, a patent value index score. It is understood that all parties involved including custodians will benefit from such a transparent system by establishing lower transaction costs for IP acquisition, IP licensing, IP taxation/valuation transactions and IP litigation.

[0054] FIG. **4** shows an exemplary online information-retrieval system. The system includes one or more databases **45***a-e*, one or more servers **40-80** and one or more access devices such computers or mobile devices connected through a network, internet or intranet.

[0055] Databases **45***a-e* includes a set of one or more databases. In the exemplary embodiment, the set includes an EDGAR, Securities and Exchange database **45***a*, at least one database of an organization containing documents, such as license agreements and/or license agreement deal data from private deals **45***b*, such as from corporations, universities, small businesses and foundations. Also included are professional directories **45***c* such as from Martindale & Hubble or West including attorneys and experts. A caselaw database **45***d*, such as a verdict and settlement database, a court-filings database or consolidated caselaw database by PACER or other services such as Lex Machina/LexisNexis are provided. Other professional databases **45***e* are provided including LinkedIn and an expert witness directory.

[0056] Databases **45***a-e* generally include electronic text. ASCI or image copies of judicial opinions for decided cases for one or more local, state, federal, or international jurisdiction Professional and expert witness directories may be included within the caselaw database **45***d*, having one or more records, lexical elements or database structures. For example, a license agreement document from Private Deal database **45***b*, may contain a Notice clause that lists an attorney(s) to which Notices pertinent to the license deal should be notified.

[0057] Professional directories or biographical databases **45***c* include professional licensing data from one or more state, federal, or international licensing authorities. In the exemplary embodiment, this includes legal, medical, engineering, and scientific licensing or credentialing authorities. Caselaw database **45***d* includes verdict and settlement databases with assessed damages, or negotiated settlement of legal disputes associated with cases within caselaw database such as PACER **45***d*. Other databases such as articles databases having articles technical, medical, professional, scientific or other scholarly or authoritative journals and authoritative trade publications, patent publications. Caselaw database **45***d* includes electronic text and image copies of briefs, motions, complaints, pleadings, discovery matters, counsel, law firm and subject matter information. Other databases include news stories, business and finance, science and technology, medicine and bioinformatics, and intellectual property information. Logical relationship hueristics across documents are provided using automatic discovery processes that leverage information such as litigant identities, dates, jurisdictions, attorney identifies, court dockets, and so forth to determine the existence or likelihood of a relationship between any pair of documents.

[0058] Databases **45***a-e* may take the form of look-up tables, SQL databases provided by electronic, magnetic, or optical data-storage devices, include or are otherwise associated with respective indices. The databases **45***a-e* are coupled via a wireless or wired communications network, such as a local-, wide-, private-, or virtual-private network, to servers **40**, **48**, **50**, **60**, **70**.

[0059] Servers **40-70** are generally representative of one or more servers for serving data in the form of webpages or other markup language forms with associated applets. ActiveX controls, remote-invocation objects, or other related software and data structures to service clients. The servers may comprise comparison server **40**, parser server **48**, extraction server **50**, data server **60** and matching engine server **80** and each may include a processor, a memory, a subscriber database, one or more search engines and software modules. Each processor may be local or distributed or virtual machines that are coupled to memory.

[0060] Home database **70** includes a subscription based data base linked via a network server includes subscriber-related data for controlling, administering, and managing pay-as-you-go or subscription-based access of database **70**. Database **70** includes subscriber-related data for controlling, administering, and managing pay-as-you-go or subscription-based access of databases **45***a-e*. Database and search engine **70** provides Boolean or natural-language search capabilities for databases **45***a-e*.

[0061] Search module **90** defines one or portions of a graphical user interface that helps users define searches for databases **45***a-e*, including software that includes one or more browser-compatible applets, webpage templates, user-interface elements, objects or control features or other programmatic objects or structures a search Interface and a results interface.

[0062] Servers **40-80** are communicatively coupled or couplable via a wireless or wired communications network, such as a Ethernet, local-, wide-, private-, or virtual-private network, to one or more accesses devices, such as access device, such as a personal computer, workstation, tablet, personal digital assistant, smart phone using I-OS, Android, Microsoft Windows operating system, and a browser such as Google or Microsoft Internet Explorer. Also included are query region having interactive control features, such as a query input portion for receiving user input at least partially defining a profile query and a query submission button for submitting the profile query to server **70**, **80**.

[0063] Comparison engine **40**, parser engine **48**, extraction engine **50**, matching engine **80** receive search queries, includes results listing portion and a document display portion, a control feature for accessing or retrieving one or more corresponding search result documents, such as a license agreement having been anonymized or professional profile data and related documents, from one or more of databases **45***a-e* relating to newly filed lawsuits via server/search engine **70**. Each category reference includes a respective document identifier or label, such as LIC 1 (License 1), LIC 2 (License 2) identifying respective technology category, subject-matter data or the corresponding expert or professional.

[0064] Matching engine **80** includes a display monitor to display a user-selected profiles identified by lexical elements that are compared and match a first category reference for a license. LIC 1. User selection of lexical elements initiates retrieval and display of the profile text for the selected license, LIC 1; selection of a second category reference initiates retrieval and display of licensing data for any licenses or other credentials held by the selected LIC 1 and an image copy of the document including display of region, in a separate window that corresponds with first category reference. Matching engine **80** may also display and retrieve law suit data such as verdict data related to the expert or a legal professional; and selection of first category reference initiates retrieval and display of documents such as complaints having matching lexical elements from legal database **45***b*, that are related to, for example where the expert or legal professional has entered an appearance. Other embodiments include additional control features for professional accessing court-filing, documents, such as briefs, and/or expert reports authored by the expert or legal professional, or even deposition and trial transcripts where the expert or professional or testimony was a participant. Still other embodiments provide control features for initiating an Internet search based on the selected expert or professional and other data and for filtering results such search based on the profile of the expert or professional.

[0065] Exemplary methods of operation of the invention will be described with respect to the Figures. FIGS. **5-7** show flow diagrams of exemplary embodiments of the present invention. The flow charts FIGS. **5-7**, includes blocks **101-104**, **201-204** and **301-306**, respectively, which are arranged and described in a serial execution sequence in the exemplary embodiment. However, other embodiments execute two or more blocks in parallel using multiple processors or processor-like devices or a single processor organized as two or more virtual machines or sub processors. Other embodiments also alter the process sequence or provide different functional partitions to achieve analogous results. For example, some embodiments may alter the client-server allocation of functions, such that functions shown and described on the server side are implemented in whole or in part on the client side, and vice versa. Moreover, still other embodiments implement the blocks as two or more interconnected hardware modules with related control and data signals communicated between and through the modules. Thus, this description applies multiple to software, hardware, and firmware implementations.

[0066] Turning to FIG. **5**, at block **101**, the Comparison engine **40** begins with receipt of a document, such as a licensing deal document. This entails receipt of an un-redacted document, such as a patent license agreement. However, as discussed below, other embodiments receive and process other types of documents. Execution then advances to Parser **48**, that entails determining the type of document. The exemplary embodiments uses one or more methods for determining document type, for example, the Parser **48** can analyze the document for particular format and syntax and/or keywords to differentiate among sensitive documents having confidentiality clauses or royalty rate data. In some embodiments, type can be inferred from the source of the document or by listing patent numbers. Incoming content types, such as license agreements, have a variety of grammar, syntax, and structural differences that allow for identification. After type (or document description) is determined, the data is parsed or anonymized according to lexical elements at block **102** where the sensitive clauses are extracted under one or more category references from the received document based on the determined type of the document by Extraction engine **50**. In the exemplary embodiment, four types of entity records are extracted: organizational names of licensee or licensor companies, product names, such as trademarks for drugs, chemicals and other products; and patent numbers.

[0067] Anonymization is defined by any technique, method, algorithms, formulae, code or means involving database anonymization, database sanitization, masking, synthetic data, Statistical Disclosure Control (SDC), Statistical Disclosure Limitation (SDL), Privacy Preserving Data Publishing (PPDP), Privacy Preserving Data Mining (PPDM), microdata anonymization, perturbative masking, non-perturbative masking, threshold-based record linkage, rule-based record linkage, probabilistic record linkage, data de-identification, k-Anonymity modeling, t-Closeness microaggregation, calibration to sensitivity, multivariate microaggregation and individual ranking microaggegation. For more description of such anonymization see, J. Domingo-Ferrer, D. Sanchez, J. Soria-Comas, Database Anonymization, Morgan & Claypool Publishers 2016, incorporated herein by reference. Each such anonymizations may provide ex post or ex ante privacy guarantees. With respect to patent license data, where general principles of anonymization apply to protecting an "individual's" information, in the context of the present invention the "individual's" information is one or all of the patent assignee, patent owner, patent inventor, licensee or licensor information.

[0068] Other anonymization methods may include black marker, pure randomization, keyed randomization, grouping, truncation, random shift, enumeration, command name, default selections, begin time, user ID or group ID.

[0069] Block **104** entails enriching un-redacted category references using a matching process. In the exemplary embodiment, this enriching process entails operating specific types of data harvesters on the web, other databases, and other directories or lists, to assemble a cache of new relevant profile information for databases, such as sensitive license data. The un-redacted entity records are then matched against the harvested entity records using Bayesian matching. Those that satisfy the match criteria are referred to a quality control process for verification or confirmation prior to addition to the relevant entity directory. The quality control process may be manual, semi-automatic, or fully automatic. For example, some embodiments base the type of quality control on the degree to which the match criteria is exceeded.

[0070] Once the sensitive data is extracted and anonymized **104**, the remaining document may be gathered in the Remaining Data database **60**, where summaries of the licensing deals may be prepared or PDFs of the anonymized data are saved. The anonymized and summarized license data may then be posted to the searchable database **90**. Thus, it may be understood that private deal data from license agreements may be opened to subscribers of the Home database **70** and such data may be searched according to category, technology area, SME, royalty rate and various other parameters to determine comparable licensing rates without disclosure of sensitive information.

[0071] As well, Parser **48** may rank licensing information. The Parser **48** may gather ranking information from licensors and licensees and include as part of the Remaining Data engine **60**. Also, prior to extraction, patent numbers may be analyzed with respect to renewal of annuity data, strength of claims, backward citation analysis and forward citation analysis. Such ranking information will be extracted by the Extraction engine **50**, so that the underlying patent number and citations are masked/redacted and only the raw ranking numerics are provided to the searchable database **90**.

[0072] For example, each licensee/licensor will rate/rank each of the following as 0, 10, 20 or 30 to generate a benchmarking score for each patent/portfolio. The benchmarking may be calculated in order to score the strength of the license, strength of the IP, level of the IP to generate revenue (e.g. the higher the score the more flexibility to generate revenue) as depicted in Table 1 below:

TABLE 1

1. Legal structure of License	2. Financial Criteria of License	3. Technology Sector for License
A. Exclusivity Clause	A. Royalty calculation	A. Granularity of Field of Use Definition
0 - No clause	0- No clause	0- No field of use definition
10- Exclusive	10- Capped total royalty payment	10- Loose definition
20 - Some portion is exclusive	20- One time payment	20 - Detailed definition
30 - Non-Exclusive	30- Percentage rate or unit rate for life of patent	30- definition tracks claims of majority of patents
B. Enforceability	B. Royalty rate	B. Hot Technology
0- No termination clause	0- No royalty or unit rate	0- Unrated technology
10- Termination clause but no right to sue	10- Rate is under 3%	10- Tech sector included in bottom third of NASDAQ composite companies
20- Termination clause and clear definition of licensed product to allow for right to sue	20- Rate is 3-10%	20 - Tech sector included in middle third of NASDAQ composite companies
30- Termination clause and liquidated damages clause and clear definition of licensed product	30- Rate is 10% or higher	30- Tech sector included in top third of NASDAQ composite companies
C.	C. Auditing Capability	4. Owner's Investment in Patent
0- SEP or lacking clear definition of SEP	0- No auditing clause	10- 1st Office Action Allowance
10- SEP under SSO with strict enforcement policy	10 - Audit solely invoices	20- Patent granted after RCE
20- SEP under SSO with lenient enforcement policy	20- Audit all books and records	30- Patent granted after appeal
30 - Non-SEP	30- Audit all books and records and certified financial statements	10- Paid 1st Annuity (small entities only)
		20- Paid 2nd Annuity (small entity)
		30 - Paid 3rd Annuity (small entity)
		40- Filed counterparts in at least 5 foreign countries (small entity only)

[0073] The Extraction engine can collect the ranking data from licensors and licensees regarding each license and link the ranking data to the extracted data from each license. The categories for ranking including exclusivity clause in license, enforceability clause in license, entanglements issues, royalty rate, royalty calculation clause, auditing clause, hot technology sector, payment of annuity and first office action allowance. The invention provides percentile rank of a raw score interpreted as the percentages of results in the normal group who scored at or below the score of interest to provide a percent rank (PR) that relies on mathematical formula:

$$PR=((f_b+½f_w)/N)100$$

[0074] f_b is the frequency below the number of benchmarks which are less than the benchmark value percentile rank;

[0075] f_w is the within the number of benchmarks which have the same value as the benchmark value of the percentile rank, and

[0076] N is the number of benchmarks,

[0077] f_b is calculated according to the following formula:

[0078] $f_b=ni/\Sigma ni$

Where n_i is the frequency of an individual item; and Σn_i is the total frequency.

[0079] If the distribution is normally distributed, the percentile rank can be inferred from the standard score. Scoring of each benchmark 1 to 1000, based upon percent ranking.

[0080] With respect to FIG. **6**, block **201** and **202** entail presenting a search interface to a user. In the exemplary embodiment, this entails a user directing a browser in a client access device to internet-protocol (IP) address for an online information-retrieval system, such as Home database **70**, and then logging into the system. Successful login results in a display of a web-based search interface being output from server **70**/**80**, and displayed by client access device.

[0081] Upon login, the subscriber, usually a lawyer or law firm registers and selects the matter matching service and inputs his/her biographical data including technical experience or degree(s). Execution then advances to block **203** that entails receipt of an automatic query that defines one or more attributes of an entity, such as a legal professional or expert. In some embodiments, the query string includes a set of terms and/or connectors, and in other embodiment includes a natural-language string or lexical elements extracted by the extraction engine **50** from a newly filed lawsuit. In some embodiments, the set of target databases **45***a-e* is defined

automatically or by default based on the form of the system or search interface or lexical elements extracted from the new complaint.

[0082] Execution continues at block **204** that entails presenting search results to a named defendant in the new lawsuit via a graphical user interface. In the exemplary embodiment, this entails the server or components under server control or command, executing the query against one or more of databases **45***a-e*, for example, to identify a summary of matching professional profiles that satisfy the query criteria (but initially excluding the name of the professional). For example, an email is sent with a link to the Home database **70**, providing a listing of results that is then presented or rendered as part of a web-based interface for the Defendant so that it may choose highly qualified and experienced counsel. Thereafter additional information may be presented regarding one or more one or more of the listed professionals once the Defendant replies and agrees to the terms of engagement of the matter matching service. In the exemplary embodiment, this entails receiving a request in the form of a user selection of one or more of the professional profiles listed in the search results. These additional results may be displayed. Matching engine interface **80** shows a listing of links from the Home database **70** and additional information related to the selected professional. The Defendant may also subscribe to the service and initiate retrieval and display of a verdict document (or other court records of a selected professional) from Home module interface **70**. If the professional that is matched by the Home interface and Matching engine is engaged by the Defendant, the professional will pay the Home interface according to the terms of the subscription agreement.

[0083] In FIG. **6**, an exemplary method of building a directory is described including the flow diagram shows an exemplary method of building an easily cross referenceable professional or expert directory or database such as used in system. At Comparison module **40**, the exemplary method begins with extraction of a first category references from newly filed complaint text documents from lawsuit database **45***d*, such as PACER. The first category references include type of lawsuit, court where filed, assigned judge and specific technology involved.

[0084] The directory is built further with reference to databases **45***a-d*. In the exemplary embodiment, this entails extracting professional and expert references from jury verdict settlement (JVS) documents that have a consistent structure that includes an expert witness section or paragraph.

[0085] The exemplary embodiment uses a Parser engine **48** to locate expert-witness paragraphs and find lexical elements (that is, terms used in this particular subject area) pertaining to an individual having subject matter expertise (SME). These lexical elements include name, degree, area of expertise, organization, city, and state. Parsing a paragraph entails separating it into sentences, and then parsing each element using a separate or specific lexical element.

[0086] Typically one expert is listed in a sentence along with his or her area of expertise and other information. If more than one expert is mentioned in a sentence, area of expertise and other elements closest to the name are typically associated with that name. Each JVS document generally lists only one expert witness; however, some expert witnesses are references in more than one JVS document.

[0087] Once the category references are defined, execution continues by Extraction engine **50** that merges expert-witness reference records that refer to the same person to create a unique expert-witness profile record for the expert or professional profile. The Extraction engine **50** or Matching engine **80** may then sort the reference records by last name to define a number of last name groups, by SME or technology area. Records within each group are then processed by selecting an unmerged expert or professional reference record and creating an new expert or professional profile record from this selected record. The new reference record is then marked as unmerged and compared to each unmerged reference record in the group using Bayesian matching to compute the probability that the expert in the profile record refers to the same individual referenced in the record. If the computed match probability exceeds a match threshold, the reference is marked as "merged." If unmerged records remain in the group, the cycle is repeated.

[0088] In an embodiment, additional information may be added to the expert and professional reference records. This entails harvesting information from other databases **40***a-d*, and sources, such as from professional licensing authorities, telephone directories, etc. In determining whether a harvested license record (analogous to a reference record) and expert or professional person refer to the same person, the exemplary embodiment computes a Bayesian match probability based on first name, middle name, last name, name suffix, city-state information, area of expertise, and name rarity. If the match probability meets or exceeds a threshold probability, one or more elements of information from the harvested license record are incorporated into the reference record. If the threshold criteria is not met, the harvested license record is stored in a database for merger consideration with later added or harvested records.

[0089] Each expert witness or professional record is assigned one or more classification categories in an expertise or technology taxonomy. Categorization of the entity records allows the Matching engine **80** search expert witness or other professional profiles by area of expertise. To map an expert or professional profile record to an expertise or technology subcategory, the exemplary embodiment uses a categorizer and a taxonomy that contains top-level categories and subcategories.

[0090] The exemplary taxonomy includes the following top-level categories: Accident & Injury Accounting & Economics Computers & Electronics; Construction & Architecture; Copyright, Criminal, Fraud and Personal Identity; Employment & Vocational Engineering & Science Environmental; Family & Child Custody; Legal & Insurance Medical & Surgical Property & Real Estate; Patent; Psychiatry & Psychology Vehicles, Transportation, Equipment & Machines; Trademarks. Each category includes one or more subcategories. For example, the "Patent" category has the following subcategories: big data storage systems, cloud services, financial services and securities trading systems, email, internet encryption systems, eCommerce technology, internet mapping systems, internet server systems, mp3 compression, gaming technology, HVAC controllers, low-latency point-to-point communication systems, microwave transmission systems, semiconductor testing systems, charger plug adapters for cell phones, pixel imaging systems, article-writing software, luggage-locking and security systems, optoelectronics, fiber optics, optical connectors, cable assemblies, semiconductor lasers, electromagnetic shield-

ing, wave division multiplexing (WDM) systems, electrical connectors, torque sensors, semiconductor chip sockets, PC cards, position sensors, electrical cables, ethernet communication devices, buss bars, differential signal terminators, automotive safety systems, microwave transmission controllers, LED bulbs and power distribution units.

[0091] Assignment of subject-matter categories to an expert or professional profile record entail using a function that maps a professional descriptor associated with the profile to a leaf node in the profile's taxonomy. This function is represented with the following equation: $T=f(S)$ where T denotes a set of taxonomy nodes, and S is the professional descriptor. The exemplary function f uses a lexicon of 500 four-character sets that map professional descriptors to expertise area.

[0092] The Matching Engine **80** associates one or more text documents and/or additional data sets with one or more of the professional profiles. To this end, the exemplary embodiment logically associates or links one or more JVS documents to expert-witness profile records using Bayesian based record matching.

[0093] To link JVS documents to expert profile records, expert-reference records are extracted from the articles using one or more suitable parsers through parsing and matched to profile records using a Bayesian inference network similar to the profile-matching technology described previously. For JVS documents, the Bayesian network computes match probabilities using seven pieces of match evidence: last name, first name, middle name, name suffix, location, organization, and area of expertise.

[0094] Turning to FIG. **7** in block **301**, the patent ranking data is processed by receiving the survey from the custodian as described above with respect to step **33** (FIG. **3**). At block **302** the patent prosecution history may be used to process the valuation data. This step should be accomplished based on information provided in the survey data from the custodian. Since the patent number is sensitive data that will be redacted from the valuation data provided to the host of the database, the custodian must provide the ranking score with respect to such patent prosecution information as identified in Table 1 above.

[0095] At block **303** industry data by technology area is processed to pair the valuation data with database information **40***a-e* Then upon identifying the appropriate technology area of the valuation data for a particular license, the ranking data can be processed more accurately using the corresponding ranking data for that specific technology area. To more accurately identify technology area the classification codes of patent offices such as the US Patent and Trademark Office class codes may be used.

[0096] At block **304**, in some embodiments the valuation data from the searchable database **90** may be analyzed and processed further using the Georgia Pacific factors. One or two of such factors may be used, or all fifteen factors may be used. In an embodiment, algorithms may be provided that correspond to each of the fifteen Georgia Pacific factors in order to computerize and automate the analysis.

[0097] At block **305** a licensing term index is provided for processing the cumulative score obtained from the preceding steps **301-304**. This index can provide on a scale of 1-1000, for example, the strength of a particular license. In order to rank each individual patent contained in a license, it is important to take each patent with respect to its corresponding license rank in order to normalize the valuation data of each patent/IP right.

[0098] Finally at block **306** a patent value index score may be provided according to the ranking methods discussed above in relation to the license term index. The patent value index may also be provided on a scale of 1-1000. The index may be used to calculate a relative royalty rate or value based on the comparable data obtained from the searching of host database **90** (FIG. **4**).

[0099] The invention may be implemented using block chain **220** is a public ledger that comprises a record of all transactions involving cryptocurrency. Transactions on the block chain **220** are independently verified by the custodian and consumer devices in the online music marketplace **100**. As such, in some examples, each custodian device **110**, and each consumer device **220**, may have a copy of the block chain **220** stored in non-transitory memory. Further, the block chain **220** may expand, as transactions in the online music marketplace **100** continue to occur and be recorded on the block chain **220**. After pre-set time intervals, new blocks in the block chain **220** may be published to the block chain, and may be available to each custodian device **110** and consumer device **120** via the network **225**. In some examples, the time intervals may be microseconds. As such, in some examples the generation of blocks in the block chain **220** may be approximately automatic. In other examples, the time intervals may be seconds. In still further examples, the time intervals may be approximately 1 minute. In other examples the time intervals may be in a range between 1 microsecond and 5 minutes. Thus, after the pre-set time intervals (e.g., 5 microseconds) since the most recent creation of a block, a new block may be created in the block chain **220**. Each block in the block chain **220** may comprise information regarding transactions performed in the time since the most recent block in the block chain **220**. Thus, all transactions are recorded in a block of the block chain **220**, which may be stored on each custodian device **110** and consumer device **120** in the online music marketplace **100**. Said another way, a transaction is part of a new block in the block chain **220**, which records a transfer of ownership of cryptocurrency. Thus, in some examples, a transaction includes a recording in the block chain **220**, of a new public key to which cryptocurrency is assigned. Thus, the ownership of cryptocurrency may be known by all artist and consumer devices in wired and/or wireless communication with network **225**, since during a transfer of ownership, the new or current public key address of that cryptocurrency is published on the block chain **220**.

[0100] The embodiments described above are intended only to illustrate one or more ways of practicing or implementing the present invention, not to restrict its breadth or scope. The actual scope of the invention is defined only by their equivalents appended hereto.

The invention claimed is:

1. A system for anonymizing license data comprising:

a first database including a set of records;

a parser module to identify one or more lexical elements contained within a license document;

a comparison module adapted to compare a first category reference against the lexical elements; and

an extraction module adapted to extract the first category reference from the document based at least in part on

the lexical elements wherein the first category reference contains sensitive license information.

2. The system of claim **1**, comprising the first category reference comprising sensitive license information including one or more of patent number, assignee name, inventor name and owner name.

3. The system of claim **1**, wherein the set of records include one or more of legal records from PACER, LinkedIn or licensing records from licensing organizations.

4. The system of claim **1** further comprising an extraction engine for collecting ranking information from one of the following categories including exclusivity clause in license, enforceability clause in license, entanglements issues, royalty rate, royalty calculation clause, auditing clause, hot technology sector, payment of annuity and first office action allowance.

5. The system of claim **1** wherein the ranking is applied in a manner to identify the most flexibility for generation of maximum royalties using a numeric scale assigned to sub-categories.

6. The system of claim **5** wherein the sub-categories include one of an Exclusivity Clause: no clause, exclusive, some portion is exclusive, non-exclusive; Enforceability clause: no termination clause, termination clause but no right to sue, Termination clause and clear definition of licensed product to allow for right to sue, Termination clause and liquidated damages clause and clear definition of licensed product; Entanglements: Standard Essential Patent (SEP) or lacking clear definition of SEP, SEP under Standard Setting Organization (SSO) rules with strict enforcement policy, SEP under SSO with lenient enforcement policy, Non-SEP; Royalty calculation: no clause, Capped total royalty payment, One time payment, Percentage rate or unit rate for life of patent; royalty: No royalty or unit rate, Rate is under 3%, Rate is 3-10%, Rate is higher than 10%; Auditing Capability: No auditing clause, Audit solely invoices, Audit all books and records, Audit all books and records and certified financial statements; Granularity of Field of Use Definition: No field of use definition, Loose definition; Detailed definition; definition tracks claims of majority of patents; Hot Technology: unrated technology, Technology sector included in bottom third of NASDAQ composite companies, Technology sector included in middle third of NASDAQ composite companies, Technology sector included in top third of NASDAQ composite companies; Strength of Patent: 1^{st} Office Action Allowance, Patent granted after Request for Continued Examination, Patent granted after appeal, Paid 1^{st} Annuity (small entities only), Paid 2^{nd} Annuity (small entity only), Paid 3^{rd} Annuity (small entity only), Filed counterparts in at least 5 foreign countries (small entity only).

7. The system of claim **1** wherein ranking is provided as a percent rank.

8. The system of claim **1** wherein the anonymization includes one of database anonymization, database sanitization, masking, synthetic data, Statistical Disclosure Control (SDC), Statistical Disclosure Limitation (SDL), Privacy Preserving Data Publishing (PPDP), Privacy Preserving Data Mining (PPDM), microdata anonymization, perturbative masking, non-perturbative masking, threshold-based record linkage, rule-based record linkage, probabilistic record linkage, data de-identification, k-Anonymity modeling, t-Closeness microaggregation, calibration to sensitivity and multivariate microaggregation and individual ranking microaggegation.

9. A method for anonymizing a document comprising the steps of:

detecting a characterization label of an entity who is a party to a contested proceeding;

obtaining a set of data comprising entities, each entity being associated with one or more features related to the entity and a characterization label indicating a characterization of the entity, the characterization labels comprising an operating company label and a patent monetizing entity label; and

using at least some of the one or more features of the entities and the characterization labels to train a classifier for predicting the characterization label of an entity in a contested proceeding; and

using the label data to compare to law firm label data in order to identify law firms with matching label data.

10. The method of claim **9**, wherein the lexical elements include one or more of person's name, degree, area of expertise, organization, city, state, license, professional designations or certifications, title, work experience, university, patent number, inventor name, assignee name, technology category, classification number, filing date, issuance date, publication date and license information including number of patents, exclusivity, standard essentiality, scope and royalty rate.

11. The method of claim **9**, comprising a second category reference comprising professional information including one or more of a person's name, title, license, degree, professional designation, work experience, court appearances, firm name.

12. The method of claim **9**, comprising a first match code set adapted to determine whether the second category reference matches any records contained in the set of harvested entity records and saving the matched records.

13. The method of claim **9**, further comprising disclosing the matched records to defendants listed in a lawsuit.

14. The method of claim **9**, wherein the second category reference includes professional records associated with one or more of the following fields: type of legal dispute, judge name, court name, law firm name, financial result, motion results, trial experience, trial results, legal subcategory of pharmaceutical, accounting, engineering, healthcare, medical, scientific, and educational.

15. The method of claim **9**, wherein the first match code set includes executable instructions for performing one or more of a Bayesian function, a match probability function, and a name rarity function.

16. The method of claim **9**, wherein one or both of the first and second match code sets includes executable instructions for satisfying a threshold match probability criteria prior to extraction.

17. The method of claim **9** further comprising the parsing engine for harvesting professional credentials that match first category references to lexical elements of professionals listed in notice section of document and disclosing credential information to defendant listed in newly filed complaint.

18. The method of claim **9**, further comprising the step of:

applying anonymizing tool to the licensing data to remove sensitive information from each license and creating a counterpart synthetic license document having the sensitive data removed and wherein anonymizing includes

one of masking, de-identifying, obsfucating and randomizing the licensing data.

19. The method of claim **18**, wherein conditional entropy H(Φ|Q) is calculated according to the equation: H(ΦQ)=−Σi=1VPc(i)·log 2Pc(i), wherein V is the number of possible values for user identity Φ and wherein $P_c(i)$ is the posterior probability of identity value, given Q.

20. A method for anonymizing licensing data comprising the steps of:

loading license data to a central file;

applying the anonymizing tool to the licensing data to remove sensitive information from each license;

creating a counterpart synthetic license document having the sensitive data removed;

loading license data from each counterpart synthetic license to a relational database and enabling searching of predetermined fields of the license data; and

a director anonymizes the licensing data where the director applies a template in order to remove predetermined sensitive data including patent numbers, licensor name and address and licensee name and address wherein the numeric benchmark values are derived by a percentile rank via the percent ranking module according to the following formula: PR=fb+12fwN*100 where PR is the percent rank; f_b is the frequency below the number of benchmarks which are less than the benchmark value percentile rank; f_w is the frequency within the number of benchmarks which have the same value as the benchmark value of the percentile rank; N is the number of benchmarks; and relative frequency is calculated according to the following formula: fb=niΣni where f_b is the frequency below the number of benchmarks which are less than the benchmark value percentile rank; and n is the number of benchmarks.

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